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EXAMINER

LEE, PHILIP C

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/611,560	Applicant(s) CARROLL ET AL.	
	Examiner PHILIP C. LEE	Art Unit 2452	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. This action is responsive to the amendment and remarks filed on October 02, 2008.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/2/08 has been entered.
3. Claims 1-38 are presented for examination.
4. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Rejections – 35 USC 112

5. The following is a quotation of the second paragraph of 35 U.S. C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claim 38 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - a. Claim language in the following claims is not clearly understood:
 - i. As per claim 38, lines 19-20, 21, it is unclear if “the one or more corresponding data stores” refers to “one or more source data stores”, “one or

more target data stores”, or both “one or more source data stores and one or more target data stores”;

ii. As per claim 38, lines 25, 26, 27 and 29, it is unclear if “one ore more programmatic interfaces”/ “the programmatic interfaces”/ “one or more defined programmatic interfaces”, refers to “one or more programmatic source interfaces” in line 6 or “one or more programmatic target interfaces” in 14.

iii. As per claim 38, lines 26 and 28, it is unclear if “each session interface” refers to “the each session interfaces” in line 24.

iv. As per claim 38, Line 31, it is unclear what is "its" referring to?

Claim Rejections – 35 USC 102

7. Claims 1, 4-6, 8-9, 13, 16-18, 20-21, 25, 28-30, 32-33 and 37-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Jayaram et al, U.S. Patent 6,996,589 (hereinafter Jayaram).

8. Jayaram was cited in the previous office action.

9. As per claims 1, 13, 25 and 37, Jayaram teaches the invention as claimed for providing bulk data transfers between one or more data stores (col. 11, lines 1-11), comprising:

a data integration server (combination of 220, 234, 235, 250, 260, 270 of fig. 2) coupled with the one or more data stores (col. 3, lines 33-52; col. 10, lines 56-63; col. 11, lines 1-

11) (system with the database conversion engine connected to the source database and target database), the data integration server comprising:

one or more programmatic source interfaces (234, fig. 2, data filters with source extract format specification; col. 14, lines 20-22), each being associated with one or more source data stores coupled to the data integration server (associated with source system 320, 225 of fig. 2), wherein the one or more programmatic source interfaces are defined according to a common programmatic source interface specification (defined according to source extract format specification)(col. 11, lines 1-5) and are exposed during a bulk data transfer (abstract), one or more data entities are extracted from the one or more source data stores for loading into one or more selected target data stores (data filters used during bulk transfer to enable the system to receive/pull source data for loading into the target system)(col. 11, lines 5-11; col. 11, line 64-col. 12, line 10); and

one or more programmatic target interfaces (270, fig. 2, data upload process consists of tools such as SQL loader (sqlldr; col. 18, lines 56-61) with target scheme specification and mapping specification), each being associated with one or more target data stores coupled to the data integration server (associated with target system 310, fig. 2), wherein the one or more programmatic target interfaces are defined according to a common programmatic target interface specification (defined according to target scheme specification and mapping specification)(col. 11, lines 5-11) and are exposed during the bulk data transfer (abstract), the bulk data transfer enables loading of the one or more data entities extracted from the one or more source data stores selected during the bulk

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data transfer (data upload used during bulk transfer to enable the system to upload the source data to the target system)(col. 11, lines 5-11; col. 12, lines 31-34).

10. As per claims 4, 16, and 28, Jayaram teaches the invention as claimed in claims 1, 13, and 25 above. Jayaram further teach a particular data store may be a source data store or a target data store for a particular bulk data transfer depending on whether data entities are extracted from the particular data store or loaded into the particular data store during the particular bulk data transfer (inherent in col. 2, lines 15-20) (system may be source or target depending on whether information is from (i.e., extracted) one system into (i.e., loaded) into another system).

11. As per claims 5, 17, and 29, Jayaram teaches the invention as claimed in claims 1, 13, and 25 above. Jayaram further teach loading data entities comprises inserting, updating, or deleting data entities (col. 11, lines 1-11) (uploading data must comprises inserting data into a target system).

12. As per claims 6, 18, and 30, Jayaram teaches the invention as claimed in claims 1, 13, and 25 above. Jayaram further teach within each programmatic interface, one or more resources representing data entities contained in the corresponding data store are defined (col. 14, lines 18-22) (data filter and data upload comprise source extract format specification, mapping specification and target scheme specification, representing the format of data); and the system is operable to, in response to a request to execute a bulk data transfer involving one or more resources contained in one or more data stores (col. 10, lines 56-63) (instructions served to the

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system for executing of schedule conversion and uploading must include request to execute), create each programmatic interface within which at least one of the resources is defined (col. 14, lines 26-28) (in response to conversion, generate source extract format specification within which format is defined).

13. As per claims 8, 20, and 32, Jayaram teaches the invention as claimed in claims 6, 18, and 30 above. Jayaram further teach one or more programmatic interfaces are defined within each session interface (col. 16, lines 24-26); each session interface isolates from its one or more defined programmatic interfaces details associated with export and import of resources involved in a bulk data transfer (col. 16, lines 26-52); and the system is further operable to, in connection with creating the programmatic interfaces, create each session interface within which at least one of the programmatic interfaces is defined (col. 16, lines 21-26).

14. As per claims 9, 21, and 33, Jayaram teaches the invention as claimed in claims 8, 20, and 32 above. Jayaram further teach session interface persists, once created, either for the entirety of the bulk data transfer or for the entirety of multiple data transfers according to its definition (col. 16, lines 22-52).

15. As per claim 38, Jayaram teaches the invention as claimed for providing bulk data transfers between one or more data stores (col. 11, lines 1-11), comprising:

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a data integration server coupled with the one or more data stores (system with the database conversion engine connected to the source database and target database)(fig. 1; col. 3, lines 33-52; col. 10, lines 56-63), the data integration server comprising:

one or more programmatic source interfaces(234, fig. 2, data filters with source extract format specification; col. 14, lines 20-22), each being associated with one or more source data stores coupled to the data integration server(associated with source system 320, 225 of fig. 2), wherein the one or more programmatic source interfaces are defined according to a common programmatic source interface specification (defined according to source extract format specification)(col. 11, lines 1-5) and are exposed during a bulk data transfer (abstract), the bulk data transfer, one or more data entities are extracted from the one or more source data stores for loading into one or more selected target data stores (data filters used during bulk transfer to enable the system to receive/pull source data for loading into the target system) (col. 11, lines 5-11; col. 10, lines 56-63; col. 12, lines 4-22); and

one or more programmatic target interfaces (270, fig. 2, data upload process consists of tools such as SQL loader (sqlldr; col. 18, lines 56-61) with target scheme specification and mapping specification), each being associated with one or more target data stores coupled to the data integration server(associated with target system 310, fig. 2), wherein the one or more programmatic target interfaces are defined according to a common programmatic target interface specification (defined according to target scheme specification and mapping specification) (col. 11, lines 5-11) and are exposed during the bulk data transfer, the bulk data transfer enables loading of the one or more data entities extracted from the one or more source data stores selected during the bulk data transfer (data upload used during bulk transfer to enable the system

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to upload the source data to the target system) (col. 11, lines 5-11; col. 12, lines 31-33; col. 10, lines 56-63), wherein each of the one or more programmatic source interfaces and each of the one or more programmatic target interfaces comprise a definition of one or more resources representing data entities contained in the one or more corresponding data stores (data filter and data upload comprise source extract format specification, mapping specification and target scheme specification, representing the format of data) (col. 14, lines 18-22) such that the system is operable to, in response to a request to execute the bulk data transfer involving one or more resources contained in the one or more corresponding data stores (col. 10, lines 56-63) (instructions served to the system for executing of schedule conversion and uploading must include request to execute), create each of the one or more programmatic source interfaces and each of the one or more programmatic target interfaces within which at least one of the resources is defined (col. 14, lines 26-28); and one or more session interfaces, the each session interface comprising a definition of one or more programmatic interfaces (col. 16, lines 24-26) such that the system is further operable to, in connection with creating the programmatic interfaces, create each session interface within which at least one of the programmatic interfaces is defined (col. 16, lines 21-26) (in response to conversion, generate source extract format specification within which format is defined), wherein each session interface isolates from its one or more defined programmatic interfaces details associated with export and import of resources involved in the bulk data transfer (col. 16, lines 26-52) (the mapping specification isolates the rules relating to the conversion of the source system to the target system from the database conversion engine).

Claim Rejections – 35 USC 103

16. Claims 10-12, 22-24, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram.

17. As per claims 10, 22, and 34, although Jayaram teaches allow each programmatic interface to produce or consume data entities in a desired format particular to the programmatic interface (col. 11, line 57-col. 12, line 22); convert data entities produced in a first format particular to a programmatic source interface to a second format particular to a programmatic target interface (col. 5, lines 50-63), however, Jayaram does not teach convert only if necessary because the first and second formats are different. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include conversion of data only if the first and second formats are different in order to avoid inefficient process of conversion between data stores of the same format.

18. As per claims 11, 23, and 35, although Jayaram teaches one or more programmatic interfaces, each programmatic interface being associated with a corresponding data store and exposed within the data integration server during a bulk data transfer to enable the data integration server to read data entities directly from and write data entities directly to the corresponding relational data store during the bulk data transfer, however, Jayaram does not teach relational interfaces. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include relational interface as alternative of programmatic

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interface because by doing so it would allow backup interface for performing the functions of the programmatic interfaces in case of failure in the programmatic interface, thus providing alternative interface without using the programmatic interface.

19. As per claims 12, 24, and 36, Jayaram teaches the invention as claimed in claims 11, 23, and 35 above. Jayaram further teach an interface schema file providing a database-neutral description of a physical database schema of the corresponding relational data store (col. 2, lines 39-55); and an interface mapping file providing a logical-to-physical mapping for all data entities defined for the relational interface to enable the data integration server to execute bulk data transfers between relational data stores having different physical database schema (col. 16, lines 22-41).

20. Claims 7, 19, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Jennyc et al, U.S. Patent 6,334,158 (hereinafter Jennyc).

21. Jennyc was cited in the previous office action.

22. As per claims 7, 19, and 31, Jayaram does not teach release of interface. Jennyc teaches programmatic interface persists, once created: if a programmatic source interface, resources of the programmatic source interface are released (col. 20, line 65-col. 21, line 5); and if a programmatic target interface, resources of the programmatic target interface are released (col. 20, line 65-col. 21, line 5).

23. Because both Jayaram and Jennyc teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of release of interface of Jennyc's system to improve similar method of interfacing systems for data transfer in Jayaram's system in the same way. By using the known technique of release of interface, it would allow Jayaram's system to allocate the released resources to other processes.

24. Jayaram and Jennyc do not teach when to release the interface. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to release the interface after the data transfer in order to avoid interruption during the transfer of the data.

25. Claims 2, 14, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Shannon et al, U.S. Patent Application Publication 2002/0046301 (hereinafter Shannon).

26. Shannon was cited in the previous office action.

27. As per claims 2, 14, and 26, Jayaram does not teach Java interfaces. Shannon teaches Java interfaces ([0031] and claim 5).

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28. Because both Jayaram and Shannon teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of JAVA interface of Shannon's system to improve similar method of interfacing systems for data transfer in Jayaram's system in the same way. By using the known technique of JAVA interface, it would allow Jayaram's system to map transferred data between the systems.

29. Claims 3, 15, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Casagrande et al, U.S. Patent 6,381,709 (hereinafter Casagrande).

30. Casagrande was cited in the previous office action.

31. As per claims 3, 15, and 27, Jayaram teaches the invention as claimed in claims 1, 13 and 25 above. Although Jayaram teaches the one or more programmatic interfaces may be supporting bulk data transfers (col. 11, lines 1-5); and the system is operable to: create the corresponding programmatic interface to enable extraction of the data from or loading of the data into the data store (col. 14, lines 26-28); and for data extraction, as the programmatic source interface produces the data extracted from the data store, send the outgoing data; or for data loading, as the data arrives, send the incoming data to the programmatic target interface for loading into the data store (col. 11, lines 1-11), however, Jayaram does not teach industry standard interface and industry standard protocol. Casagrande teaches an interface supporting data transfer according to an industry standard protocol (fig. 4, col. 8, lines 60-67); receive a

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request from a client indicating that the client is extracting data from or loading data into a data store in accordance with the industry standard protocol (col. 3, lines 48-51); and send the outgoing data to the client in accordance with the industry standard protocol (col. 3, lines 1-4).

32. Because both Jayaram and Casagrande teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of FTP interface of transferring data in Casagrande's system to improve similar method of interfacing systems for data transfer in Jayaram's system in the same way. By using the known technique of FTP interface, it would allow Jayaram's system to exchange data between systems on a network.

33. Applicant's arguments with respect to claims 1-38, filed 10/02/08, have been fully considered but they are not persuasive.

34. In the remark, applicant argued that:

- (1) Claim 38 is in full compliance with the requirements of 35 USC 112th, second paragraph
- (2) Jayaram fails to teach computer-implemented data integration system for providing bulk data transfers between one or more data stores.
- (3) Jayaram fails to teach data integration server coupled to one or more data stores and the data integration server comprising one or more

programmatic source interfaces and one or more programmatic target interfaces.

(4) Jayaram fails to teach one or more programmatic source interfaces, each being associated with one or more source data stores coupled to the data integration server, wherein the one or more programmatic source interfaces are define according to a common programmatic source interface specification and are exposed during a bulk data transfer, one or more data entities are extracted from the one or more source data stores for loading into one or more selected target data stores.

(5) Jayaram fails to teach one or more programmatic target interfaces, each being associated with one or more target data stores coupled to the data integration server, wherein the one or more programmatic target interfaces are defined according to a common programmatic target interface specification and are exposed during a bulk data transfer, the bulk data transfer enables loading of the one or more data entities extracted from the one or more selected source data stores during the bulk data transfer.

(6) Office action fails to establish a prima facie case of obviousness based on the “Examination Guidelines for Determining Obviousness Under 35 USC 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*”

(7) Office action fails to provide an indication of the level of ordinary skill.

(8) Office action fails to explain why the difference between the combination of Jayaram, Jennyc, Shannon, Casagrande, and the claimed invention would have been obvious to one of ordinary skill in the art.

35. In response to point (1), the amendment of claim 38 filed on 10/2/08 has not overcome the rejections of 35 USC 112th, second paragraph presented in the previous office action. Furthermore, the amendment filed on 10/2/08 necessitated a new ground of rejection of 35 USC 112, second paragraph for claim 38.

36. In response to points (2) and (3), Jayaram does teach a system for executing bulk data transfers between data stores (col. 1, lines 6-9). Specifically, Jayaram teaches a computer system with the data conversion engine, which receive/pull source data (source data store) and upload resulting source data to target database (target data store) (fig. 1; col. 3, lines 33-52; col. 10, lines 56-63) (i.e., a data integration server coupled to one or more persistent data stores). As shown in figure 2, the computer system comprises data conversion engine 250, data filter 234 (col. 14, lines 20-22) and data upload 270 (i.e., the data integration server comprises one or more programmatic source interface (data filters, 234; col. 14, lines 20-22) and one or more programmatic target interface (data upload process consists of tools (e.g., sql loaders), 270) (col. 18, lines 56-61).

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37. In response to points (4) and (5), Jayaram teaches source interfaces (234, data filters with source extract format specification; col. 14, lines 20-22), each being associated with a corresponding source data store coupled to the data integration server (associated with source system 320, 225 of fig. 2 coupled to the system of conversion engine), defined according to a common programmatic source interface specification (defined according to source extract format specification, col. 11, lines 1-5), and exposed within the data integration server during a bulk data transfer (abstract; col. 1, lines 6-9), one or more data entities are extracted from the one or more source data store for loading into one or more selected target data stores (data filters used during bulk transfer to enable the system to receive/pull source data for loading into the target system)(col. 11, lines 5-11; col. 11, line 64-col. 12, line 10). Jayaram further teach target interfaces (270, fig. 2, data upload process consists of tools such as SQL loader (sqlldr; col. 18, lines 56-61) with target scheme specification and mapping specification), each being associated with a corresponding target data store coupled to the data integration server (associated with target system, 310 of fig. 2 coupled to the system of conversion engine), wherein the one or more programmatic target interfaces are defined according to a common programmatic target interface specification (defined according to target scheme specification and mapping specification)(col. 11, lines 5-11), and exposed within the data integration server during the bulk data transfer (abstract; col. 1, lines 6-9), the bulk data transfer enables loading of the one or more data entities extracted from the one or more selected sourced data stores during the bulk data transfer (data upload used during bulk transfer to enable the system to upload the source data to the target system)(col. 11, lines 5-11; col. 12, lines 31-34).

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38. In response to points (6)-(7), the rejections set forth above provide the factual findings and rationale for obviousness based on Court Decision in *KSR International Co. v. Teleflex Inc.*, which include an indication of the level of ordinary skill.. Hence, applicant argument is moot in view of the factual findings and the rationales set forth above.

39. In response to points (8), the rejections set forth above provide rationale for obviousness based on Court Decision in *KSR International Co. v. Teleflex Inc.*, which include explanation of the difference between the combination of Jayaram, Shannon, Casagrande, Walsh, and the claimed invention would have been obvious to one of ordinary skill in the art. Hence, applicant argument is moot in view of the rationales set forth above. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

40. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are

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unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip C Lee/

Patent Examiner, Art Unit 2452